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ABSTRACT

In an investigation of language transference vs. language interference, 12 trainable mentally retarded Spanish speakers (5 to 9 years old) were trained to name in English objects previously identified receptively and objects not previously identified receptively in Spanish. Results indicated no significant difference in the number of words learned between the groups. It was concluded that the known Spanish vocabulary did not significantly interfere with the training. (Author/CL)

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Language Transference by Mentally
Retarded Spanish Speakers

by

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ABSTRACT

The focus of this study was that of language transference versus language interference by trainable mentally retarded Spanish speakers. The subjects were twelve trainable mentally retarded Spanish speakers at a public school in Los Angeles; they were deficient in their usage of Spanish and English. They were trained to name in English objects previously identified receptively and objects not previously identified receptively in Spanish. The results indicated that there was no significant difference in the number of words learned between the groups. The conclusion was that the known Spanish vocabulary did not significantly interfere with the training of the children of this study.

INTRODUCTION

Many elementary children in special education schools of the southwestern states are Hispanic. Yet there is little research related to their special needs in instruction. Most of the research relates to their appropriate placement (Chandler and Plakos, 1970).

The Spanish speaker is presently placed in a bilingual classroom in certain U.S. cities if he is assessed as a non-English speaker. Additional research is strongly suggested by this author to demonstrate the value of bilingual education for the child in a special education classroom. For example, perhaps the retarded child becomes even more confused in a bilingual classroom than the child of average intelligence or better. Research is essential in order to demonstrate the benefit of bilingual programs for the child who is Spanish dominant and trainable mentally retarded (T.M.R.).

Perhaps the T.M.R. Spanish speaker should receive instruction only in Spanish. Language interference between Spanish and English may be so overwhelming that the retarded child

will not be able to learn English.

There is yet another reason that supports Spanish instruction for some Hispanic children. These children come from mono-lingual Spanish speaking homes. Perhaps that child's language environment will always be Spanish. Perhaps Spanish instruction is, therefore, the only appropriate education for such a child.

On the other hand, perhaps the Spanish speaker should receive instruction only in English. English is often taught more formally in school than Spanish. English is heard on the playgrounds of schools with an integrated Spanish and English speaking population. Therefore, English frequently becomes the stronger language (Luther, 1979).

In addition, instruction in English may facilitate language transference. The child may fairly rapidly learn the translation of the Spanish vocabulary that he or she already knows, if instruction is only in English. The child will not need to relearn the meaningfulness of a word when he already associates the word with, for example, an object which he names in Spanish (Ben-Zeevin, in Hornby, 1977). The child will just have to learn a new linguistic symbol for the object in English.

On the other hand the intellectual limitation of the Spanish speaker who is T.M.R. may interfere with his or her acquisition of English vocabulary for items already known in Spanish. Therefore, perhaps only vocabulary and language concepts unknown in Spanish should be taught in English. That is to say, perhaps a bilingual program of vocabulary carefully selected from each

of the two languages should be offered to the T.M.R. Spanish speaker.

Purpose of the Study

The purpose of this study was to compare the increases in expressive English vocabulary by Spanish speaking T.M.R. elementary school children depending on whether or not the vocabulary had been previously identified receptively in Spanish.

Research Question

The research question may be stated thus: Is there a significant difference in the number of English words learned expressively by T.M.R. Spanish speakers depending on whether or not the word was previously identified receptively in Spanish? Further speculation will relate the increase in English vocabulary of the children to the following variables: their mental ages, diagnoses of mental retardation, sexes, and expressive Spanish vocabulary.

Definitions

A few of this author's definitions may be useful. Language transference refers to the learned translation of a term in a second language. Language interference refers to the

linguistic confusion which occurs when two or more languages are understood, or used.

Receptive language, as used in this study, refers to the skill in recognition of spoken names for objects; this skill was demonstrated by each child as he pointed to the objects named by the Speech Specialist. Expressive language, as used in this study, refers to the use of spoken names for objects. Spanish dominance refers to one's superior fluency in Spanish as compared with one's fluency in another language.

Training session refers to the weekly instructional time. Training period refers to the duration of time during the session in which 25 responses are recorded for a word being trained. A prompt is a cue by the trainer (such as "sh" for "shoe") to elicit a correct response. Approximation is a response by the child which closely resembles the word demanded (such as "bah" for "ball").

METHOD

This study resulted from an experiment by the author, a public school Speech-Language Specialist. She is the Speech Specialist referred to in this study. She controlled the training variables during her delivery of language development services, but she was unable to control any supplementary training which may have occurred in the subjects' classrooms or homes.

Subjects

A Speech Specialist at an elementary school for the handicapped in Los Angeles examined all of the Spanish speakers in three classrooms. Each child who met the following criteria was enrolled for language development services and selected for this study:

1. assessed as trainable mentally retarded by the school psychologist; in addition, differentially diagnosed as retarded by Down's Syndrome or developmental delay;
2. assessed as deficient in usage of expressive Spanish and English on the appropriate item of a standardized test when that level of development was compared with the child's over-all range of mental development;
3. determined from school records as between 5-0 and 9-0 chronological years at the beginning of the experiment.

Those students included in the experiment met the following criteria, in addition:

1. assessed as Spanish dominant by a standardized test;
2. determined from school records as from a home with a low family income; the student, therefore, received free lunches and milk at school;
3. determined from school records as from a home of Hispanic parents born in a country other than the U.S.

Of the thirteen children who qualified, one responded with non-sense words so frequently that no data was collected for her case. Therefore, the data of the twelve remaining Spanish

speaking T.M.R. children were collected, tabulated, and analyzed by the Speech Specialist.

Procedure

The receptive and expressive language skills of each child were assessed by the Speech Specialist with the Utah Test of Language Development (Mecham, Jex, and Jones, 1967) in September 1979. The results demonstrated that although some of the children had language ages in Spanish or in English within a few months of their mental ages, none of them passed the expressive item in Spanish or in English appropriate for his mental age. The Spanish translation of the test was one developed by the Specialist.

In addition, the Speech Specialist determined the language dominance of each child with the Test for Auditory Comprehension of Language (Carrow, 1973). The results demonstrated that all of the children comprehended the Spanish language better than the English language. Therefore, the subjects were described as Spanish dominant.

For language development services, the Specialist used her Spanish adaptation of the Language Acquisition Program (LAP) for the Retarded or Multiply Implied (Kent, 1974). The Specialist had previously received permission to adapt the LAP from that program's author, Dr. Louise R. Kent-Udolf.

The Speech Specialist pre- and posttested each child with her Spanish/English Inventory of vocabulary adapted from the LAP. She marked an item as correct on the Inventory in the appropriate language (Spanish and/or English) if it was passed on two trials after a random presentation.

The items chosen for training were from her Spanish adaptation of three parts of the LAP: Naming Objects, Naming Room Parts, and Vocabulary Expansion.

The training vocabulary of each child was divided into two groups: Group 1 (words identified receptively in Spanish); and Group 2 (words not identified receptively in Spanish).

The Speech Specialist delivered the language development services after receiving written permission from each child's parent. She trained each child to identify receptively in English those objects only identified receptively in Spanish (Group 1). And she trained each child to identify receptively in English those objects not identified receptively in either Spanish or in English (Group 2). Then she chose the first 6 words learned in each group for this study. She did not record any data for the receptive learning procedure.

She then trained each child to name in English six of his words from Group 1 and six of them from Group 2. These words were those learned expressively in English in this study.

Before any data was recorded, the child imitated the name of the object after the Speech Specialist's oral model. When the child had done this with a close approximation for 10 consecutive trials, the Specialist asked the child, "What is

this?" When the child responded appropriately for 10 trials, she placed the new object beside an object easily named by the child (such as "ball" or "car"). She asked the child to name the new object. At that point the Specialist noted whether the response was correct or incorrect for the trial. She continued her data collection for each subsequent trial.

She randomized commands and changed the position of the objects; but she always noted if the response for the new object was correct or incorrect for that trial. When possible, she added a third object, also an object easily named by the child. She continued to randomize her commands and change the position of the objects. After 25 commands to name the new object, she ceased training on the object for the session.

During a training period on a new word a child occasionally made two successive errors. Data recording was then, temporarily, suspended. Preparatory steps, such as imitation of the new word, were repeated until the child responded correctly and consistently for 5-10 trials. Then training and recording of data was resumed. Correct responses after a prompt were always recorded as correct during the training period. Spanish names for items were recorded as incorrect during the training period and English tests.

The Speech Specialist introduced one, two, or three different new objects during each session; the number depended on the child's rapidity in reaching 25 trials per new item.

Before each session, the Speech Specialist posttested the child on the previously trained items. Items forgotten were

trained again in the same manner. She posttested again during a subsequent session. Training was temporarily suspended for items not learned after five sessions (a total of 125 responses had been recorded for the item not learned).

Each training session lasted between 25 and 35 minutes. The services were conducted once a week for six months. The trial data were recorded on the Data Sheets of the LAP. The sheets were collected and tabulated by the Speech Specialist. The pre- and posttest data were recorded on the author's adaptation of the Inventory of the LAP. The Inventories were collected and tabulated by her.

She grouped the data for each child according to whether the word had previously been identified receptively in Spanish (Group 1) or not (Group 2). Then she analyzed the data with the appropriate statistical tests.

RESULTS

Inferential Analysis Between Groups 1 and 2

Therapy results (see Table 1) were analyzed using a non-directional t-test. There was not a significant difference between the means of the two groups ($t=0.88$; $df=22$; $p>0.05$). Therefore, the T.M.R. Spanish Speakers learned to use expressively words in English which they had previously understood in Spanish as frequently as those that they had not (Group 2).

Correlation Analyses of Words Learned and Other Variables

There were no significant correlations between the number of words learned and the other variables. Specifically, the Pearson product-moment correlation was used to compare the number of words learned expressively with the mental ages of the subjects. The correlation was not significant for Group 1 ($r=0.09$; $r^2=0.008$; $df=10$; $p>0.05$) or for Group 2 ($r=-0.1$; $r^2=0.01$; $df=10$; $p>0.05$). The Pearson product-moment correlation was also used to compare the number of words learned expressively in English with the number of words used expressively in Spanish. The correlation was not significant for Group 1 ($r=0.31$; $r^2=0.09$; $df=10$; $p>0.05$).

A point-biserial correlation was used to compare the number of words learned expressively with the diagnoses of mental retardation. The correlation was not significant for Group 1 ($r_{pb}=0.04$; Down's $\bar{X}=3.12$ and delayed $\bar{X}=3$; $df=10$; $p>0.05$) or for Group 2 ($r_{pb}=0.29$; Down's $\bar{X}=2.87$ and delayed $\bar{X}=1.75$; $df=10$; $p>0.05$). In addition, a point-biserial correlation was used to compare the number of words learned expressively with the subjects' sex. The correlation was not significant for Group 1 ($r_{pb}=0.04$; girls' $\bar{X}=2.83$ and boys' $\bar{X}=2.66$; $p>0.05$) or for Group 2 ($r_{pb}=0.28$; girls' $\bar{X}=3$ and boys' $\bar{X}=2$; $p>0.05$).

DISCUSSION

The results of this research indicate that the theory of language transference is supported for this particular group of students. Evidently these T.M.R. Spanish speakers learned to use expressively in English some words which they had previously identified (and sometimes used) in Spanish. Language interference did not produce a significant handicap in their learning the vocabulary in a second language. Therefore, it appeared that English instruction was a feasible alternative to Spanish or bilingual instruction for these children.

However, the lack of a relationship between the number of words learned and mental age, diagnosis, or sex was not expected. These variables have been demonstrated in previous research to sometimes significantly affect language learning. Therefore, the reliability of the results of this study may be questioned. The study should be done with many more T.M.R. Spanish speakers in order to determine the appropriateness of the findings for all Hispanic T.M.R. children.

In addition, therapy should be continued with the present students in order to increase the data of the study. A greater amount of data per student and a larger student population could then be evaluated on the same hypothesis. Some generality to comparable student groups might be reasonable at the conclusion of such an enlarged study.

It was noted by the parents of two of the students

that their children were less frequently speaking in Spanish at home at the conclusion of the experiment in March 1980. It appeared that the learned English vocabulary was being substituted for the previously used Spanish vocabulary. The effect of this on the families of monolingual Spanish speaking homes was not measured. An attitudinal survey of the families of the children in a study such as this one should be done in the future, as well as replication and expansion of the current study.

TABLE 1

The subjects and their scores, diagnoses, mental ages, and sexes.

Subject		M.A. Sex No. of words assessed by Spanish/English Inventory						
No.		GROUP 1			GROUP 2			
		Learned	Iden.	Used	Learned	Iden.		
		Express.	Recep.	Express.	Express.	Recep.		
		English	Span.	Span.	English	English		
*1	AS 5-6	M	3	6	6	2	6	
2	JD 3-6	M	6	6	6	6	6	
3	AR 3-3	M	2	6	0	0	6	
*4	VV 3-0	F	4	6	0	1	6	
*5	TM 3-0	M	1	6	0	0	6	
6	LR 3-0	F	4	6	6	4	6	
7	CF 2-6	F	3	6	0	3	6	
8	JV 2-6	M	1	6	6	1	6	
9	JV 2-4	F	3	6	6	4	6	
10	JC 2-1	M	3	6	6	3	6	
*11	CM 2-1	F	4	6	6	4	6	
12	EC 2-1	F	3	6	0	2	6	
$\bar{X}$			3.08			2.5		

*Diagnosis of developmental delay with retardation; all other students had the diagnosis of Down's Syndrome.

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